CLAIMS:

1. A transponder (10, 110, 210) provided with an integrated circuit (20, 120, 220), an antenna (12, 112, 212), and a first capacitor (11, 111, 211) provided with a dielectric and a first and a second capacitor electrode (22, 122, 222; 24, 124, 224), which transponder comprises a stack of layers, i.e.:

- a first layer (1, 101, 201) of a dielectric material,
- a first patterned electrically conductive layer (2, 102, 202) of which the antenna (12, 112, 212) forms part,
- a second layer (3, 103, 203) of a dielectric material, and
- a second patterned electrically conductive layer (4,104,204),

characterized in that

- the second patterned layer (4,104,204) comprises a first electrode (14, 114, 214) of the integrated circuit (20, 120, 220) and the second capacitor electrode (24, 124, 224).

2. A transponder (10, 210) as claimed in claim 1, characterized that

- the first patterned layer (2, 202) comprises the first and a third capacitor electrode (22, 222; 32, 232),
- the second patterned layer (4, 204) comprises a fourth capacitor electrode (34, 234),
- the third and the fourth capacitor electrode (32, 232; 34, 234) form a second capacitor (13, 213) in conjunction with the second layer of dielectric material (3, 203),
- the first capacitor (211) forms a first connection (231) between the integrated circuit (220) and the antenna (212), and
- the second capacitor (213) forms a second connection (261) between the antenna (212) and the integrated circuit (220).

3. A transponder (210) as claimed in claim 2, characterized in that the first and the third capacitor electrode (222; 232) at the same time form the antenna (212).

4. A transponder (10, 110, 210) as claimed in claim 1 or 3, characterized in that the first patterned layer (2, 102, 202) occupies a larger surface area than does the second patterned layer (4, 104, 204).

5. A transponder (10, 110) as claimed in claim 1 or 2, characterized in that

- the integrated circuit (20, 120) comprises a second electrode (15, 115),
- a stack of a semiconducting layer (6, 106), a third layer (5, 105) of dielectric material, and a third patterned electrically conductive layer (7, 107) comprising the second electrode (15, 115) of the integrated circuit (20, 120) is present on the second patterned layer (4, 104), and
- a fourth layer (8, 108) of dielectric material is present on said stack.

6. A transponder (10, 110) as claimed in claim 5, characterized in that the semiconducting layer (5, 105) comprises an organic material.

7. A transponder (10, 110) as claimed in claim 5, characterized in that at least one of the patterned layers (2, 102; 4, 104; 7, 107) comprises a doped organic polymeric material.

8. A transponder (10, 110) as claimed in claim 5 or 6, characterized in that

- edge zones (36, 136; 37, 137) of the first layer of dielectric material (1, 101) and edge zones (38, 138; 39, 139) of the second layer of dielectric material (3, 103) are adhered to one another, and
- a substantially uninterrupted protective layer comprising the first and the fourth layer of dielectric material (1, 101; 8, 108) is present.

9. A transponder (10) as claimed in claim 4 or 5, characterized in that

- the first patterned layer (2) comprises a first contact surface (23),
- the second patterned layer (4) comprises a second contact surface (25), and
- the first and the second contact surface (23, 25) are in contact with one another.

10. An appliance provided with a transponder (10, 110, 210) which comprises an integrated circuit (20, 120, 220), an antenna (12, 112, 212), and a first capacitor (11, 111, 211), characterized in that a transponder (10, 110, 210) as claimed in any one of the preceding claims is present therein.